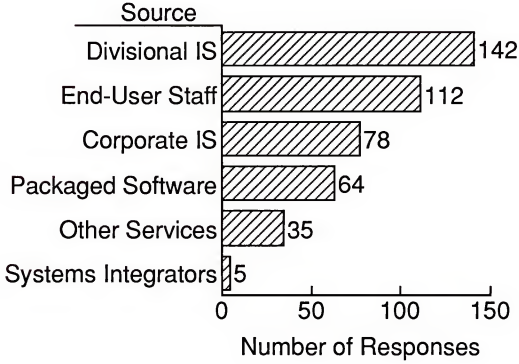
Manufacturing Markets

Lloyd Payton
INPUT Consultant

Process Manufacturing

Source of Development Resources



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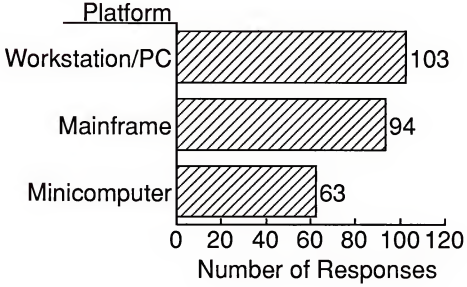
Process Manufacturing

Planned Platforms for New Applications



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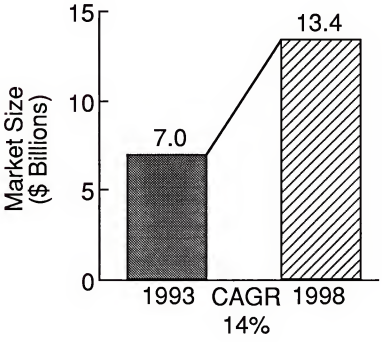
Process Manufacturing Sector Information Services Market, 1993-1998



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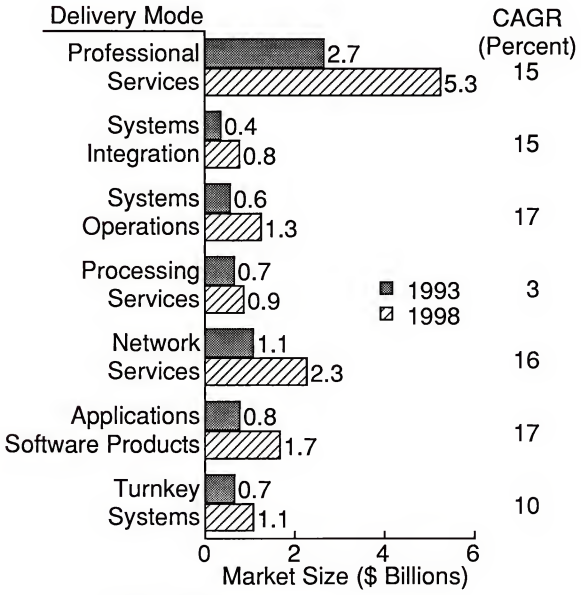
Process Manufacturing Market by Delivery Mode, 1993-1998



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Facets of Re-Engineering

- Team assignments to perform complete operations, typically called "focused cells".
- Worker empowerment, moving decisions to the lowest possible level
- Continuous improvement in terms of:
  - Shortening all cycles in the business operations
  - Work towards achieving 100% acceptable quality in all processes and products
  - 100% customer satisfaction
- Responsiveness to total market and individual customer needs.
- Streamlining to perform only in a company's area of expertise.

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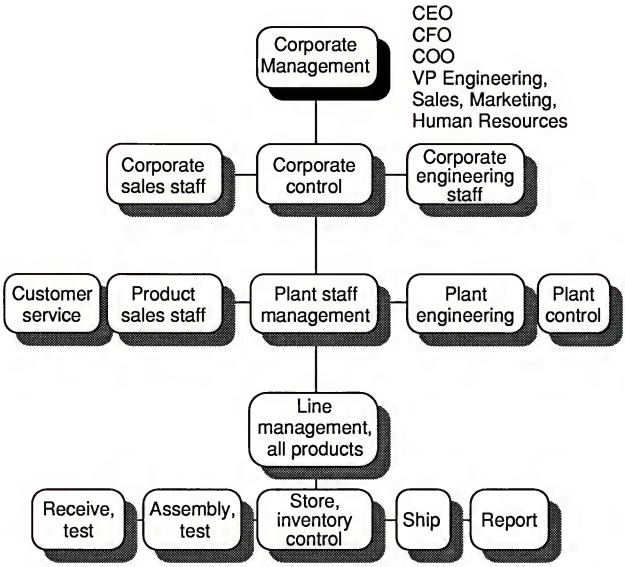
Discrete Manufacturing

Old Hierarchical Structure



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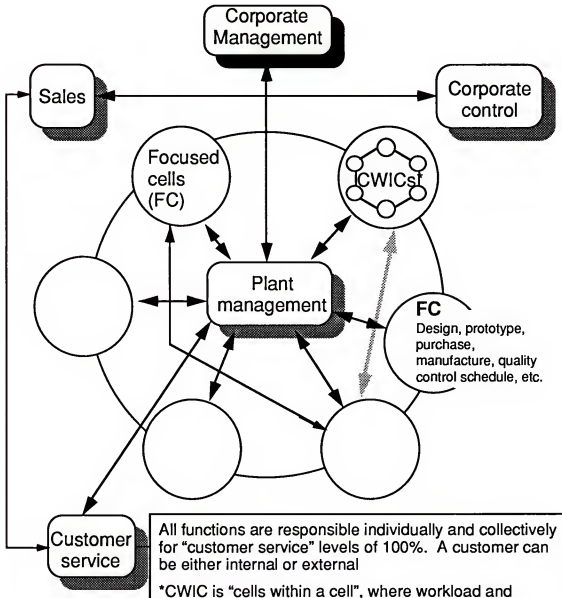
Discrete Manufacturing

Re-Engineered Structure



All functions are responsible individually and collectively for "customer service" levels of 100%. A customer can be either internal or external

*CWIC is "cells within a cell", where workload and diversity of assignments may call for further quality control and responsibility

Each focused cell has total responsibility for the completion of its operation, from design to movement out of the cell!

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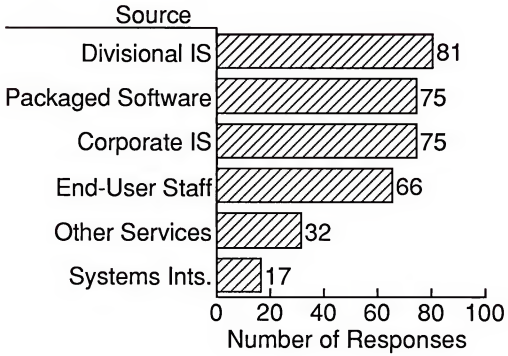
Discrete Manufacturing

Source of Development Resources



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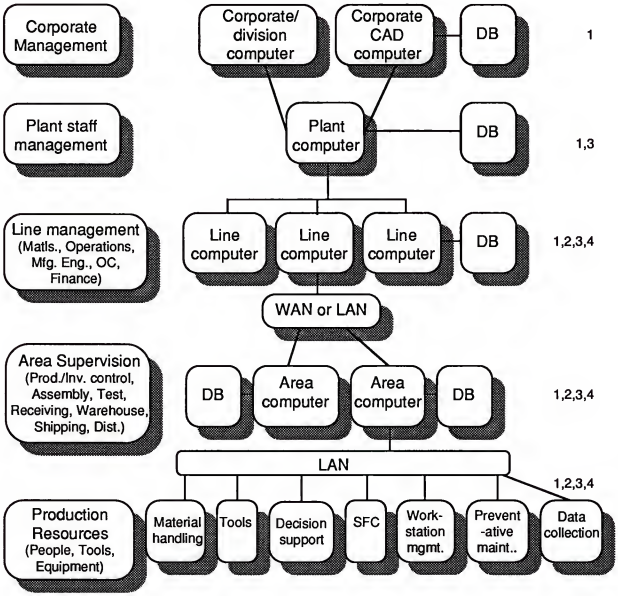
Discrete Manufacturing

Old Manufacturing Control Hierarchy



1 = Software integration
2 = Hardware integration
3 = Plant scheduler
4 = Quality monitor

DB = Data base
WAN = Wide-Area Network
LAN = Local-Area Network
SFC = Shop Floor Control

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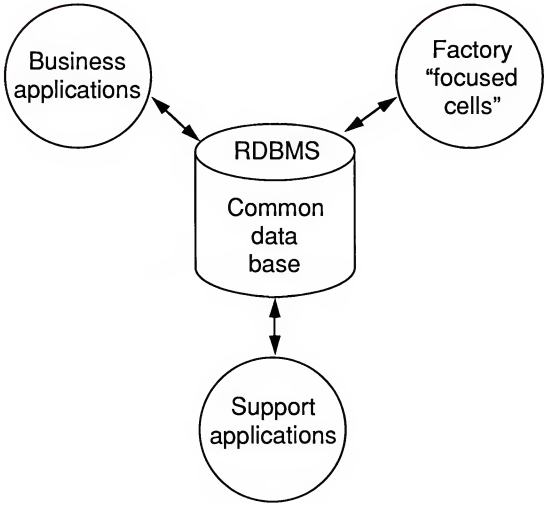
Discrete Manufacturing

CIM in the Re-Engineered Business



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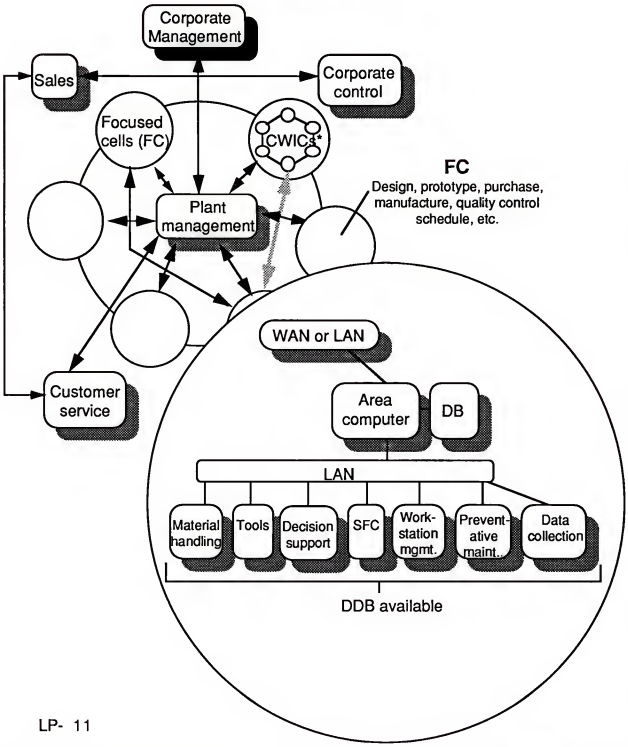
Discrete Manufacturing

Focused Cell



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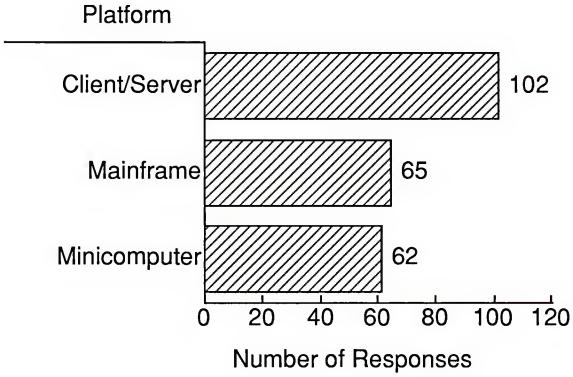
Target Platforms—Discrete Manufacturing



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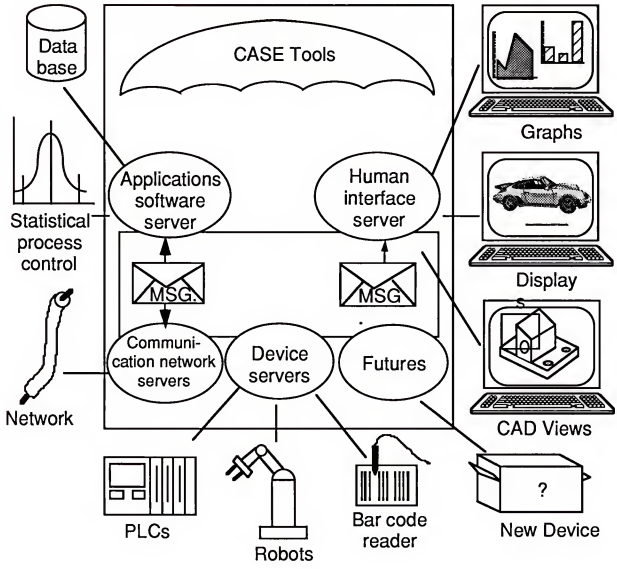
Cell Controllers



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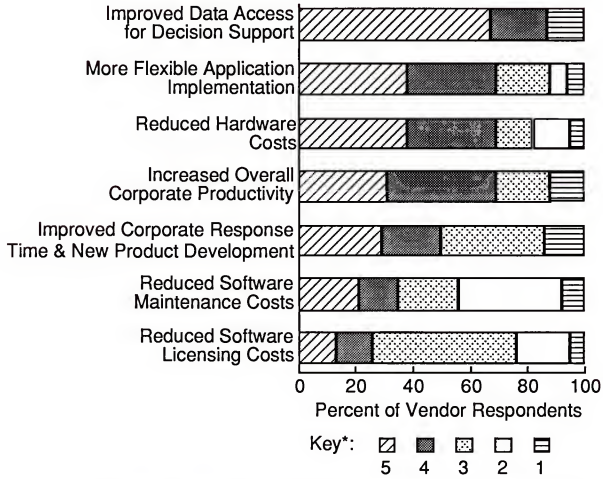
Reasons for Change



*Shading indicates the rating assigned by respondents. The size of the shaded area shows the percentage of respondents who rated each benefit.

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Discrete Manufacturing

Characteristic IS Plans Large and Medium-Sized Companies

Large	Medium
• Protect legacy systems – Need "open" systems – Buy fewer services from software vendor • Maintain IS staff • Is closer to final TQM • Take longer to buy • Has stringent requirements • Is less likely to be able to quantify benefits quickly • Does committee buying • Heavy use of third-party consulting • Not as concerned about vendor stability	• Top executives involved in purchases. Can apply benefits quickly • Decide more on intuition than on total productivity concerns • Look for industry expertise/experience • Install quickly • Look for total solution from one source • Buy more technical contract services • Will want a lot more as time passes

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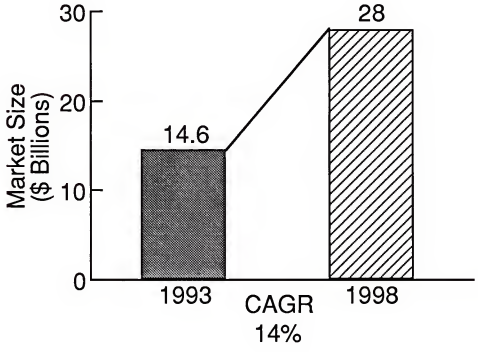
Discrete Manufacturing Sector Information Services Market, 1992-1998



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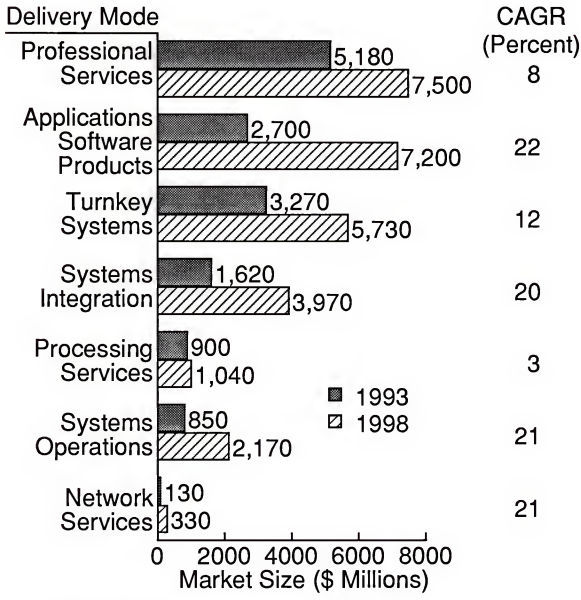
Discrete Manufacturing Market Size by Delivery Mode, 1993-1998



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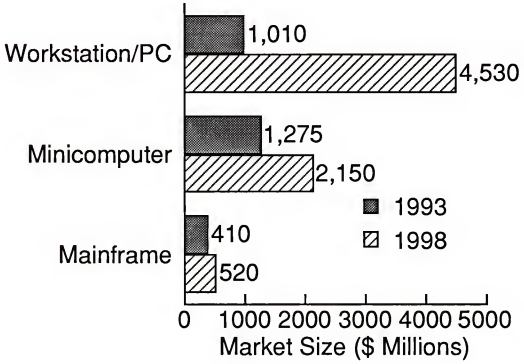
Applications Software Products Expenditures by Platform Size, 1993-1998



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Discrete Manufacturing

Recommended Vendor Actions

- Target narrow market segments
- Invest in internal training
- Invest in open systems
- Understand the concept and implications of re-engineering
- Beware price erosion

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Notes:

R. LLOYD PAYTON
WESTERN REGION MANAGER
CONSILIUM, INC.

PROFILE

CAPABILITIES

Mr. Payton is Western Region Manager for Consilium, Inc., a developer/implementor of factory floor solution software. In this role, Mr. Payton is responsible for the sale and satisfactory implementation of software that improves the responsiveness, visibility, and profitability for Consilium's clients.

The typical client requires industry-specific knowledge from the vendor, and consulting, systems integration, and project management assistance are included in the services. The software offering includes client/server technology and an object-orientation in the latest version.

BACKGROUND

Mr. Payton has performed in various sales and senior management roles, notably with Burroughs and Xerox Corporations, as well as running his own manufacturing company for eight years. He has been active as an independent consultant, offering services to such companies as Pirelli and Sara Lee Corporations.

During his career, Mr. Payton has worked extensively on total quality management program implementations. He has had the responsibility for designing the solutions required to meet the needs of manufacturing companies as they re-engineer in the 1990s. He has also performed consulting services for vendors that sell into the manufacturing marketplace, validating sales plans, training, and performance objectives.